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INSTRUMENTS FOR MEASURING PATIENT SAFETY COMPETENCIES IN CLINICAL SETTINGS: A LITERATURE REVIEW

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ABSTRACT
Patient safety culture has emerged as a global priority necessitating improvement to prevent patient accidents. Measuring the competency of healthcare workers concerning patient safety within health services is essential, and various instruments can be employed for this purpose. This study aims to analyze the instruments used to measure patient safety competency. Method: A systematic review was conducted using the PRISMA protocol and the JBI assessment tool to identify eligible articles. Two electronic databases, PubMed and Google Scholar, were searched. The keywords used in the research included “instrument safety culture in clinical settings”; “Safety culture instrument”; "instrument for patient safety culture". Inclusion criteria encompassed research on instruments measuring patient safety competency, published in English within the last ten years (2014-2024). Results: The review identified 15 articles that met the inclusion criteria. Four types of instruments were commonly used to measure patient safety competency: the Safety Attitudes Questionnaire (SAQ), the Manchester Patient Safety Framework (MaPSAF), the Hospital Survey on Patient Safety Culture (HSOPSC), and the TeamSTEPPS Teamwork Perceptions Questionnaire (T-TPQ). Conclusion: The instruments SAQ, MaPSAF, HSOPSC, and T-TPQ have demonstrated effectiveness in measuring various dimensions related to patient safety culture. To optimize the assessment of patient safety culture within health service facilities.

Keywords: clinical setting; instruments; patient; safety

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INTRODUCTION

Healthcare providers are responsible for evaluating the systems within their organizations to achieve optimal outcomes in treating patients (DiCuccio, 2015). One of the core analyses in all hospital units is patient safety issues. Patient safety is integral to hospital safety, which includes the safety of medical equipment and building infrastructure, environmental safety, hospital business, and individuals within the hospital (DiCuccio, 2015). It is a top priority for policymakers, including service providers and managers at various levels (DiCuccio, 2015). Furethermore, it is one of the barometers of national and international accreditation standards (Pfeiffer et al., 2013). One step to improving safety is through ensuring patient safety.Patient safety is currently a global priority, where many cases of medical claims arise as a result of medical errors that occur to patients. The patient safety system includes risk evaluation, patient risk identification and management, incident reporting and analysis, the ability to study and follow incident developments, as well as implementing solutions to reduce risks

and prevent injuries (Kurniawan, 2017). World Health Organization (WHO) and the Institute of Medicine (IOM) claim that in 2020 the United States experienced 98,000 cases of preventable deaths due to medical errors. A report from research on hospitals accredited by the Joint Commission International (JCI) found 52 incidents in 11 hospitals in 5 countries. The highest cases occurred in Hong Kong, reaching 31%, followed by Australia with 25%, India with 23%, the United States with 12%, and Canada with 10% (Buharia B, Machmud R, 2018; Daud, 2020). Reports regarding patient safety incidents in Indonesia in 2019 at accredited hospitals reached 2,877 cases, with only 12% or 7,465 patient safety incidents reported. Case details include 171 deaths, 80 serious injuries, 372 moderate injuries, 1,183 minor injuries, and 5,659 cases without injury (Toyo et al., 2023).

Patient safety incidents are often caused by suboptimal implementation of patient safety culture. Patient safety denotes a collection of values, competencies, attitudes, and behaviors that influence the level of involvement, dedication, and ability of individuals or groups to support and improve patient safety. With a culture of patient safety, health services can improve and prevent errors in health care, which subsequently can improve patient safety. To do so, it is necessary to measure the competence of health workers through the effectiveness of the instruments used in health services (Reis et al., 2018). In this scenario, the researchers aim to examine the instruments for measuring patient safety competency in the clinical environment.

METHOD

This research utilized a literature review methodology, focusing on: 1) articles written in English; 2) publications from the past decade (2014-2024); and 3) studies related to patient safety culture instruments in hospitals. The exclusion criteria were: 1) publications dated prior to 2013; 2) research on irrelevant topics; and 3) studies unrelated to patient safety culture instruments in hospitals. Each identified article was thoroughly reviewed and assessed for relevance based on the inclusion criteria. The literature research was carried out from December 2023 to March 2024 using Pubmed and Google Scholar to identify articles published from 2014 to 2024.The keywords used in the research included “instrument safety culture in clinical settings”; “Safety culture instrument”; "instrument for patient safety culture". Only articles published in English (a well-accepted universal language) were included in the review. The protocol for the literature review was followed systematically, including citations, theoretical basis, methodology, aims, and conclusions. The initial screening led to the inclusion of 1,256 articles for further review. The review was carried out in four stages using the Preferred Reporting Items for Systematic Review and Meta-analysis (PRISMA) framework. In the first stage, the initial search obtained 1,256 which were extracted as follows: 526 articles from PubMed, and 730 articles from Google Scholar. In the second stage, abstracts were examined according to inclusion criteria. At this stage, 870 articles were excluded for these did not tap into the instruments for patient safety culture in hospitals. In the third stage, of the remaining 96 articles, we selected 34 articles for review based on the full-text structure. The list of 15 articles is presented in Table 1.

RESULTS

This literature review identified fifteen articles that satisfied the inclusion criteria. The identification of articles documented 8 articles applying a cross-sectional research design, 1 article employing qualitative design, 1 article involving a pilot study, 3 articles in the form of a survey, and 1 article with randomized control trial (RCT) and pre-post cultural assessment. The results show several instruments used to measure patient safety competency, including the SAQ (Safe Attitudes Questionnaire) used to measure clinical staff attitudes towards

patient safety encompassing risk management, team communication, and safety culture in 4 articles. Furthermore, three articles discussed the MaPSAF (Manchester Patient Safety Framework), which is designed to measure and enhance patient safety across various healthcare services. Additionally, four articles detailed the use of the HSOPSC (Hospital Survey on Patient Safety Culture), an instrument aimed at assessing the clinical team's perception of cooperation and collaboration to enhance patient safety. Finally, 3 articles explore T-TPQ (TeamSTEPPS Teamwork Perceptions Questionnaire) to assess the clinical team's perception of cooperation and collaboration in efforts to improve patient safety.

DISCUSSION

The development of instruments to measure patient safety culture occurs as a response to the increasing concern for improving patient safety in various health services. Patient safety culture includes the values, attitudes, and behaviors that support patient safety priorities. Several factors that underlie the importance of patient safety competency include the clinical environment where patients receive various health services which often involve various health workers. Given the multitude of roles involved, the establishment of clear standards for measuring safety competency is imperative. The next factor is diverse practices between individuals, teams, and health facilities. Instruments used to measure patient safety competency can help establish consistent standards for evaluating personnel performance and ensure that safe practices are consistently implemented. In addition, it can be used to improve the quality of health services and help health organizations meet the accreditation standards and regulations to ensure that staff have acquired skills on par with established standards.

The review results document 4 articles describing the attitude of staff or health workers towards patient safety in health services. The results show that the SAQ instrument helps identify several factors that influence patient safety culture, including teamwork climate, management and administration systems, and stress recognition and perceptions of management to reduce pressure and workload while improving performance. The instrument also measures health workers' workload, which is more demanding in health services than that at home, such as home care services and nursing homes (Alqahtani & Evley, 2020; Buljac-samardzic et al., 2015; Carvalho et al., 2015; Gabrani et al., 2015). The results also capture 3 articles exploring the MAPSAF instrument. These studies identify areas that require improvement and propose strategies to reduce the risk of errors and improve the overall quality of health services. The findings reveal that the existing patient safety culture has inadequately addressed the issues within healthcare facilities, failed to facilitate effective communication for evaluating practice changes, and lacked sufficient resources related to patient safety culture. (Hoffmann et al., 2014; Marshall et al., 2017; Wang et al., 2023).

The other cluster of research explores the HSOPSC instrument. Five articles in this area engaged the instrument to assess the attitudes of clinical staff toward patient safety in the clinical environment. The results show that the application of the HSOPSC instrument in hospitals in China, Romania, Central Iran, Kuwait, and South Korea showed better scores on management, action, and support for patient safety, incident reporting and communication, and teamwork. Notwithstanding, some issues remain existent, including non-punitive responses to mistakes and poor teamwork between units and staffing. This highlights the need for action and support from management to implement a patient safety culture in hospitals. Several studies have used the instrument effectively to assess patient safety culture in hospitals (Kiaei et al., 2015; Lee & Dahinten, 2021; Salem et al., 2019; Teranu et al., 2017; Xu et al., 2022). Finally, 3 articles measure safety culture using the T-TPQ instrument. These were concerned with investigating the clinical team's perception of cooperation and

collaboration to improve patient safety. The results show that the T-TPQ effectively measures the team's perceptions of working as a team, providing the cornerstone for enhancing patient safety in health services (Keebler et al., 2014; Skoogh et al., 2022; Staines et al., 2020).

CONCLUSION

The results of the literature review document few challenges to implementing patient safety culture based on measurements using the SAQ, MaPSAF, HSOPSC, and T-TPQ instruments. SAQ, MaPSAF, HSOPSC, and T-TPQ have been widely used to assess and enhance patient safety culture. Future studies are advocated to explore strategies to assess and elevate patient safety culture in health service facilities

REFERENCES

Alqahtani, A. S., & Evley, R. (2020). Application of Safety Attitudes Questionnaire (SAQ) in Adult Intensive Care Units : a cross-sectional study Abstract : https://doi.org/https://doi.org/10.1101/2020.07.07.20114918;

Buharia B, Machmud R, D. D. (2018). Implementation of patient safety in accredited hospitals and its determining factors in Jambi City, Indonesia. Elev Int J Nurs Educ Pract Res, 1(2), 134–144.

Buljac-samardzic, M., Wijngaarden, J. D. H. Van, & Doorn, C. M. D. Van. (2015). Safety culture in long-term care : a cross-sectional analysis of the Safety Attitudes Questionnaire in nursing and residential homes in the Netherlands. BMJ Quality & Safety Online First, July, 1–9. https://doi.org/10.1136/bmjqs-2014-003397

Carvalho, P. A., Bernarda, L., Göttems, D., Raquel, M., Maia, G., Liz, M., & Oliveira, C. De. (2015). Safety culture in the operating room of a public hospital in the perception of healthcare professionals. Rev. Latino-Am. Enfermagem, 23(6), 1041–1048. https://doi.org/10.1590/0104-1169.0669.2647

Daud, A. (2020). Sistem Pelaporan dan Pembelajaran Keselamatan Pasien Nasional (SP2KPN). Kementerian Kesehatan Republik Indonesia.

DiCuccio, M. H. (2015). The Relationship Between Patient Safety Culture and Patient Outcomes: A Systematic Review. Journal of Patient Safety, 11, 135–142.

Gabrani, A., Hoxha, A., Simaku, A., & Gabrani, J. C. (2015). Application of the Safety Attitudes Questionnaire (SAQ) in Albanian hospitals : a cross-sectional study. BMJ Open, 5, 1–10. https://doi.org/10.1136/bmjopen-2014-006528

Hoffmann, B., Müller, V., Rochon, J., Gondan, M., Müller, B., Albay, Z., Weppler, K., Leifermann, M., Mießner, C., Güthlin, C., Parker, D., Hofinger, G., & Gerlach, F. M. (2014). Effects of a team-based assessment and intervention on patient safety culture in general practice : an open randomised controlled trial. . . BMJ Qual SafBMJ Qual Saf, 23, 35–46. https://doi.org/10.1136/bmjqs-2013-001899

Keebler, J. R., Dietz, A. S., Lazzara, E. H., Benishek, L. E., Almeida, S. A., Toor, P. A., King, H. B., & Salas, E. (2014). Validation of a teamwork perceptions measure to increase patient safety. BMJ, 23, 718–726. https://doi.org/10.1136/bmjqs-2013-001942

Kiaei, M. Z., Ziaee, A., Mohebbifar, R., Khoshtarkib, H., & Ghanati, E. (2015). Patient safety culture in teaching hospitals in Iran : assessment by the hospital survey on patient safety culture (HSOPSC). Journal of Health Management & Informatics, 3(2), 1–6.

Kurniawan. (2017). Peratur Menteri Kesehat Republik Indones Nomor 17 Tahun 2017 tentang Keselam pasien. 87(1,2), 149–200.

Lee, S. E., & Dahinten, V. S. (2021). Adaptation and validation of a Korean- language version of the revised hospital survey on patient safety culture (K-HSOPSC. BMC Nursing, 20(12), 1–8. https://doi.org/https://doi.org/10.1186/s12912-020-00523-w

Marshall, M., Cruickshank, L., Shand, J., Perry, S., Anderson, J., Wei, L., Parker, D., & Silva, D. De. (2017). Assessing the safety culture of care homes : a multimethod evaluation of the adaptation , face validity and feasibility of the Manchester Patient Safety Framework. BMJ Quality and Safety, April, 1–9. https://doi.org/10.1136/bmjqs-2016-006028

Pfeiffer, Y., Briner, M., Wehner, T., & Manser, T. (2013). Motivational antecedents of incident reporting: evidence from a survey of nurses and physicians. Swiss Medical Weekly, 143, w13881–w13881. https://doi.org/https://doi.org/10.4414/smw.2013.13881

Reis, C. T., Paiva, S. G., & Sousa, P. (2018). The patient safety culture : a systematic review by characteristics of Hospital Survey on Patient Safety Culture dimensions. International Journal for Quality in Health Care, 30(May), 660–677. https://doi.org/10.1093/intqhc/mzy080

Salem, G. Al, Bowie, P., Morrison, J., Salem, A., & Bowie, P. (2019). Hospital Survey on Patient Safety Culture : psychometric evaluation in Kuwaiti public healthcare settings. BMJ Open, 9, 1–10. https://doi.org/10.1136/bmjopen-2018-028666

Skoogh, A., Bååth, C., Louise, M., & Lord, H. (2022). Healthcare professionals ' perceptions of patient safety culture and teamwork in intrapartum care : a cross - sectional study. BMC Health Services Research, 22, 1–11. https://doi.org/10.1186/s12913-022-08145-5

Staines, A., Lécureux, E., Rubin, P., Baralon, C., & Farin, A. (2020). Impact of TeamSTEPPS on patient safety culture in a Swiss maternity ward. International Journal for Quality in Health Care, 32(July 2019), 618–624. https://doi.org/10.1093/intqhc/mzz062

Teranu, C., Ghelase, M. S., Sampierto, G., Furtunescu, F. L., Dragoescu, A., Molnar, A., Moraru, D., Stanescu, C., Gavrila, O. A., Ptrascu, A., Golli, A. L., & Dragomir, M. I. (2017). Measuring Patient Safety Culture in Romania Using the Hospital Survey on Patient Safety Culture (HSOPSC). Current Health Sciences Journal, 43(1), 31–40. https://doi.org/10.12865/CHSJ.43.01.05

Toyo, E. M., Leki, K. G. B., Indarsari, F., & Woro, S. (2023). Evaluasi Sistem Pelaporan Insiden Keselamatan Pasien Dengan Metode HMN Di Rumah Sakit. Majalah Farmasetika, 8(1), 56–69.

Wang, L.-, Wang, X., & Zou, M. (2023). Assessing patient safety culture in obstetrics ward : A pilot study using a modified Manchester Patient Safety Framework in China. Wiley Nursing Open, 10(February 2022), 658–664. https://doi.org/10.1002/nop2.1332

Xu, X. P., Deng, D. N., Gu, Y. H., Ng, C. S., & Cai, X. (2022). Changing patient safety culture in China : a case study of an experimental Chinese hospital from a comparative perspective Changing patient safety culture in China: a case study of an experimental Chinese hospital from a comparative perspective. Risk Management and Healthcare Policy, 11, 83–98. https://doi.org/10.2147/RMHP.S151902.